

REMARKS

Present Status of the Application

This is a full and timely response to the outstanding non-final Office Action mailed on December 09, 2004. The Office Action has rejected claims 1- 8 under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Kuriyama et al. (US 6,166,405) and further in view of Hesih et al. (US 6,448,595)

Claims 1-8 remain pending of which claim 1 has been amended to more accurately describe the invention and to correct editorial errors. The specification has also been amended to correct editorial errors. It is believed that no new matter is added by way of these amendments made to the claims or otherwise to the application.

After carefully considering the remarks set forth in this Office Action and the cited references, Applicants respectfully submitted that the presently pending claims are in condition for allowance. Reconsideration and withdrawal of the Examiner's rejection are requested.

Discussion of Office Action Rejections

The Office Action has rejected claims 1-5, 7-8 under 35 U.S.C. § 103(a) as being unpatentable over AAPA in view of Kuriyama et al. (US 6,166,405, Kuriyama hereinafter).

To establish a prima facie case of obviousness under 35 U.S.C. § 103(a), the reference or references, taken alone or combined, must teach or suggest each and every element recited in the claims. See M.P.E.P. § 2143, 8th, February 2003. Applicants respectfully submit that the AAPA

in combination with Kuriyama are legally deficient for the purpose of rendering claim 1 unpatentable.

The present invention teaches in claim 1, among other things, *'....a self-aligned block, located on the photodiode sensory region; and a protective layer located on the substrate, covering the self-aligned block and the entire transistor device region...'*

Contrary to the Office's allegation, the APA and Kuriyama at least fail to teach or suggest the above-mentioned features. Regarding the Kuriyama reference, Kuriyama in fact teaches forming a gate insulating film 11 covering both the photo-receiving region and the detection region (col. 7, ln. 40-45). Kuriyam further teaches forming a reflection reducing film 15a on the insulating film 11 above the photo-receiving portio, and the reflection reducing film 15a is formed to cover only a part of the transfer gate electrode to permit the effective supply of hydrogen to the substrate (col. 6, ln. 50-68, Fig. 1). A silicon oxide film 16a, which functions as a part of an interlayer insulating film is then formed on the reflection reducing film 15a (col. 8, ln. 30-32).

The Office alleges that the reflection reducing film 15a is equivalent to the protective layer of the invention, while the gate insulating film 11 is construed as the self-aligned block of the invention. Applicants respectfully disagree. First of all, it is unreasonable to interpret a gate insulating film as a self-aligned block. Further, the self-aligned block of the invention is formed only over the photodiode sensory region, wherein the gate insulating film of Kuriyama is formed over both the photo-receiving region and the detection region. Second, the present invention teaches a protective layer covering both the self-aligned block and the entire transistor device

region. On the other hand, the reflection reducing film 15a of Kuriyama is formed to cover only a part of the transfer gate electrode.

For at least these reasons, Applicant respectfully asserts that AAPA in view of Kuriyama fails to teach or suggest the present invention or to render claim 1 unpatentable. Since claims 2-5, 7-8 are dependent claims, Applicants respectfully assert that these claims also are in condition for allowance. Thus, reconsideration and withdrawal of this rejection are respectively requested.

The Office Action rejected claim 6 under 35 U.S.C. § 103(a) as being unpatentable over AAPA in view of Kuriyama and further in view of Hsieh et al. (Hsieh hereinafter).

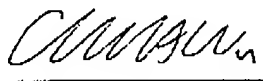
With regard to the rejections of claim 6, Applicants respectfully submit that the claim defined over the prior art references for at least the reasons as independent claim 1 discussed above. Reconsideration and withdrawal of the rejections are respectfully requested.

CONCLUSION

For at least the foregoing reasons, it is believed that the presently pending claims 1-8, are in proper condition for allowance. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

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